

REMARKS

Claims 27, 32-38 and 47-50 are active. A minor edit has been made to Claim 27. Claims 39, 40, 51 and 52 have been cancelled. No new matter has been added. Favorable consideration is respectfully requested.

Rejection—35 U.S.C. §112, second paragraph

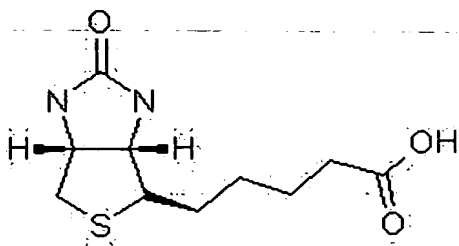
Claims 39, 40, 51 and 52 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. This rejection is now moot.

Rejection—35 U.S.C. §102

Claims 27, 32-36, 38-40 and 47-52 were rejected under 35 U.S.C. §102(b) as being anticipated by Johnson et al., EP 123300, as evidenced by “Physical Properties of Dextran”, dextran.net. The Applicants traverse this rejection because Johnson does not disclose the (water-soluble carrier)-enzyme-protein complex of the invention.

Initially, the dextran disclosed by Johnson is in the form of beads. Dextran beads constitute cross-linked or solid dextran and would not be water soluble. The document “Physical Properties of Dextran” does not refer to dextran beads, such as *Sephadex*, but to “dextran fractions”. On the other hand, Johnson, page 3, lines 22 and 25 refers to “a solid substrate, such as dextran beads”.

Furthermore, Johnson discloses a structurally different type of complex. The Johnson complex is a carrier-(competitive inhibitor)-enzyme-biotin-protein complex which is subsequently treated to form an enzyme-biotin-protein complex. The enzyme in the Johnson complex is conjugated to biotin (not to a protein). The chemical formula of biotin is depicted below:



Furthermore, as shown below, the elements in the Johnson complex (top) and the invention (bottom) are different:

carrier	(competitive inhibitor)	enzyme	biotin	protein
(water-soluble carrier)		enzyme		protein.

Therefore, the Applicants respectfully request that this rejection be withdrawn, since Johnson does not disclose the water-soluble carrier-enzyme-protein complex of the present invention.

Rejection—35 U.S.C. §102

Claims 27, 32-36, 38-40 and 47-52 were rejected under 35 U.S.C. §102(e) as being anticipated by Ohbayashi et al., U.S. Patent No. 6,252,053. The cited art does not anticipate the invention because the complex of Ohbayashi is structurally different from that of the invention. Col. 2 lines 43-49 indicate that the Ohbayashi complex is formed “by conjugating the enzyme to the antibody via a carrier (emphasis added)”. The invention requires that the protein be conjugated to the enzyme, but not the carrier.

Furthermore, as shown below, the structural elements in the Ohbayashi complex (top) and the invention (bottom) are arranged in a different order:

antibody (protein)	carrier	enzyme	
	carrier	enzyme	protein.

Accordingly, the Applicants respectfully request that this rejection be withdrawn.

Rejection—35 U.S.C. §103

Claim 37 was rejected under 35 U.S.C. §103(a) as being unpatentable over either Johnson et al., EP 123300 or Ohbayashi et al., U.S. Patent No. 6,252,053, in view of Chichibu, et al., U.S. Patent No. 5,019,498. The cited prior art does not render the invention obvious, because Johnson, Ohbayashi and Chichibu do not disclose or suggest the elements of the present invention in the required arrangement.

Johnson has been discussed above and does not disclose a water-soluble carrier or the elements of the invention. Ohbayashi also has been discussed above and discloses an antibody (protein)-carrier-enzyme complex, but does not disclose the carrier-enzyme-protein complex of the invention. Unlike Ohbayashi, in the invention, the protein is conjugated to the enzyme and not the carrier. Chichibu was cited as disclosing hyaluronic acid specific binding protein, but does not disclose or suggest the complex of the invention. Accordingly, the Applicants respectfully request that this rejection be withdrawn.

CONCLUSION

In view of the above amendments and remarks, the Applicants respectfully submit that this application is now in condition for allowance. Early notification to that effect is earnestly solicited.

Respectfully submitted,

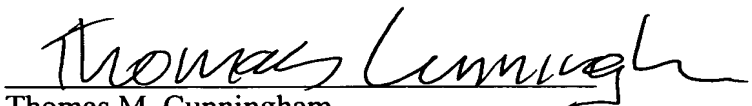
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